

REMARKS

I. Introduction

As a result of this response, claims 1-9 and 20-22 are pending in the present application. Claims 1, 5 and 20 have been amended, claims 10-19 have been cancelled without prejudice, and claims 21-22 have been added. In view of the following remarks, it is respectfully submitted that claims 1-9 and 20-22 are allowable, and reconsideration is respectfully requested.

II. Rejection of Claim 5 Under 35 U.S.C. § 112, second paragraph

Claim 5 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Regarding this rejection, the Office Action states (emphasis added below):

It is not understood how an immovable element can be in direct contact with a layer that is beneath the layer that the functional layer is contacting. If the layer first sacrificial layer is removed from an area in which is was present between the immovable element and the layer beneath the first sacrificial layer, then the immovable element and the layer beneath would still not be in direct contact. There may not be any other layer between the two layers as shown in Applicant's Figure 2, but the immovable element and the layer underneath the sacrificial layer are still not contacting each other, there is a gap of air between the element and layer. The only way the immovable object could be actually contacting the layer underneath is if it somehow shifted downward after removing the sacrificial layer.

Thus, the Office Action states that it is unclear how the immovable element of the functional layer can be in direct contact with the layer which is underneath a layer that the functional layer is contacting (i.e. the sacrificial layer). The Office Action further posits that this would only be possible if the immovable element moved down after the sacrificial layer was removed in order to contact the layer underneath the sacrificial layer. However, the Applicants respectfully disagree that this interpretation by the Office action is the only way for the previously presented claim language to be reasonable, and in fact the Applicants submit that this interpretation is not the intended meaning of the previously presented claim language and not the meaning that one of ordinary skill in the art would arrive at in light of the specification. Nevertheless, in order to expedite matters, the Applicants have amended claim 5 clarify any possible confusion as to the intended meaning of the previously presented claim language, while retaining essentially the same scope.

As amended, claim 5 recites that the sacrificial layer is not present in a first area of the immovable elements, and that the functional layer in the first area is in contact with a layer which is situated underneath the sacrificial layer in a second area. Furthermore, the Office's attention is respectfully drawn to FIG. 2, along with the currently amended claim language, for an explanation as to why the Office Action's interpretation of the previously presented claim language was not the only way for the language to be true, and indeed not even the interpretation that is most sensical in light of the disclosure of the application. FIG. 2 shows a first area of the immovable elements, i.e., the area of electrodes 9 and bond pads 10, in which the immovable elements are in direct contact with conductor layer 4 which is underneath the sacrificial layer 5 in a second area, i.e., the relatively larger area centrally located above the conductive layer 4 between the electrodes 9 and bond pads 10. Moreover, FIG. 2 also depicts an additional example of the currently presented claim language. That is, another first area of the immovable elements, i.e., the area of fastening element 11, is in direct contact with insulation layer 3, which is underneath the sacrificial layer 5 in the second area that is the relatively larger area centrally located above the conductive layer 4 between the electrodes 9 and bond pads 10.

Therefore, the language of claim 5, as amended, is definite, and it is respectfully requested that this rejection be withdrawn.

III. Rejection of Claims 1 and 5 Under 35 U.S.C. § 102(b)

Claims 1 and 5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Reichenbach et al. (WO 01/46066 A2, hereinafter "the Reichenbach reference"). US 2004/0065932 is used as the English equivalent for WO 01/46066 A2 for purposes of citing within this response. Applicants respectfully submit that the rejection should be withdrawn for the following reasons.

To anticipate a claim under § 102(b), a single prior art reference must identically disclose each and every claim element. See Lindeman Maschinenfabrik v. American Hoist and Derrick, 730 F.2d 1452, 1458 (Fed. Cir. 1984). If any claimed element is absent from a prior art reference, it cannot anticipate the claim. See Rowe v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997). Anticipation requires the presence in a single prior art reference disclosure of

each and every element of the claim invention, arranged exactly as in the claim. Lindeman, 703 F.2d 1458 (Emphasis added). Additionally, not only must each of the claim limitations be identically disclosed, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the inventions of the rejected claims, as discussed above. See Akzo, N.V. v. U.S.I.T.C., 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986). To the extent that the Examiner may be relying on the doctrine of inherent disclosure for the anticipation rejection, the Examiner must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art.” (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Independent claim 1, as amended, recites:

*A component, comprising:
a functional layer;
a surface micromechanical structure produced in the functional layer
and including movable elements and immovable elements;
at least one electrically non-conductive first insulation layer;
at least one first sacrificial layer; and
a substrate to which is connected the functional layer via the at least
one electrically non-conductive first insulation layer and the at least one first
sacrificial layer,
wherein:
the movable elements are exposed by partially removing the at
least one first sacrificial layer in the area of the movable elements,
the at least one electrically non-conductive first insulation
layer includes a material that is substantially not attacked in the removing of
the at least one first sacrificial layer; and
the component is configured to perform an intended
functionality of the component.*

The Reichenbach reference does not identically disclose, or even suggest, at least the above-identified claim features. Specifically, the Reichenbach reference does not disclose (or even suggest) a component in which movable elements are exposed by partially removing a sacrificial layer in the area of the movable elements, and in which the component is configured to perform an intended functionality of the component.

In rejecting claim 1, the Office Action asserts that a transitory state between the depictions of Figs. 9 and 10 of the Reichenbach reference teaches the partially removed

sacrificial layer. Namely, the Office Action states:

The movable elements are exposed by partially removing the at least one first sacrificial layer in the area of the movable elements using wet etching (p. 4, paragraph 48). Although Reichenbach et al teach that vapor etching follows the wet etching step to remove the remainder of the first sacrificial layer, a component is described in Reichenbach et al after the wet etching and prior to the vapor etching, which is at the point between Figures 9 and 10 of the description.

Thus, the Office Action states that in a transitory state between wet etching and vapor etching, a partially removed sacrificial layer exists in the Reichenbach reference. However, the Applicants respectfully submit that this rejection is not in tune with a common sense understanding of the disclosure of the present application, i.e., an understanding that a person of ordinary skill in the art would have. That is, a person of ordinary skill in the art would easily understand the difference between a fully manufactured component, such as is described by currently pending claim 1, and a transitory manufacturing state of a component which is merely fleeting.

Therefore, to clarify the language of claim 1, i.e., to make it clear that the claimed component is a completely manufactured component, not a transitory state which exists only briefly, the Applicants have amended to the claim to add the feature that the component is configured to perform an intended functionality of the component. As such, because the supposed transitory state of the Reichenbach reference does not exist once the component has been completely manufactured, the Reichenbach reference does not disclose, or even suggest, a component in which movable elements are exposed by partially removing a sacrificial layer in the area of the movable elements, *and* in which the component is configured to perform an intended functionality of the component. That is, the Reichenbach reference provides no disclosure or suggestion concerning the existence of the transitory state once the manufacturing is completed, and no disclosure or suggestion concerning any intended functionality of the transitory manufacturing state.

Therefore, for at least the above reasons, independent claim 1 and its dependent claim 5 are not anticipated by the Reichenbach reference, and withdrawal of this rejection is respectfully requested.

IV. Rejection of Claims 2 and 20 Under 35 U.S.C. §103(a)

Claims 2 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Reichenbach reference. Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

In rejecting a claim under 35 U.S.C. §103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091 (Fed. Cir. 1986). Third, the prior art references must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent that the Examiner may be relying on the doctrine of inherent disclosure to support the obviousness rejection, the Examiner must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art.” (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

Claim 2 ultimately depends on amended claim 1, and independent claim 20 includes substantially similar features as those discussed above in regards to independent claim 1. Moreover, as noted above, the Reichenbach reference does not disclose or even suggest all of the features of independent claim 1. Therefore, dependent claim 2 and independent claim 20 are also patentable over the Reichenbach reference at least for the reasons discussed above in connection with claim 1, and it is respectfully requested that this obviousness rejection be withdrawn.

V. Rejection of Claims 3-4 and 6-7 Under 35 U.S.C. §103(a)

Claims 3-4 and 6-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Reichenbach reference in view of Laermer (WO 02/38492 A1, hereinafter “the Laermer reference”). US 2004/0112937 A1 is used as the English equivalent for WO 02/38492 A1 for

purposes of citing within this response. Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

Claims 3-4 and 6-7 ultimately depend on amended claim 1. As noted above, the Reichenbach reference does not disclose or even suggest all of the features of independent claim 1. Furthermore, the Laermer reference does not remedy the critical deficiencies of the Reichenbach reference in regards to the rejection of claim 1. Therefore, claims 3-4 and 6-7 are patentable over the Reichenbach and Laermer references, and it is respectfully requested that this rejection be withdrawn.

VI. Rejection of Claim 8 Under 35 U.S.C. §103(a)

Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Reichenbach reference in view of the Laermer reference as applied to claim 3 above, and further in view of U.S. Patent No. 5,490,034 to Zavracky et al. (hereinafter “the Zavracky reference”). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

Claim 8 ultimately depends on amended claim 1. As noted above, the Reichenbach and Laermer references do not disclose or even suggest all of the features of independent claim 1. Furthermore, the Zavracky reference does not remedy the critical deficiencies of the Reichenbach and Laermer references in regards to the rejection of claim 1. Therefore, claim 8 is patentable over the Reichenbach, Laermer and Zavracky references, and it is respectfully requested that this rejection be withdrawn.

VII. Rejection of Claim 9 Under 35 U.S.C. §103(a)

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Reichenbach reference in view of the Laermer reference as applied to claim 3 above, and further in view of the Zavracky reference and in view of Chatterjee et al. (hereinafter “the Chatterjee reference”). Applicants respectfully submit that the rejection should be withdrawn for at least the following reasons.

Claim 9 ultimately depends on amended claim 1. As noted above, the Reichenbach, Laermer and Zavracky references do not disclose or even suggest all of the features of

independent claim 1. Furthermore, the Chatterjee reference does not remedy the critical deficiencies of the Reichenbach, Laermer and Zavracky references in regards to the rejection of claim 1. Therefore, claim 9 is patentable over the Reichenbach, Laermer, Zavracky and Chatterjee references, and it is respectfully requested that this rejection be withdrawn.

VIII. New Claims

New claims 21 and 22 depend on independent claims 1 and 20, respectively, which claims 1 and 20 are allowable at least for the reasons discussed above. As such, new claims 21 and 22 are also allowable.

CONCLUSION

Applicants respectfully submit that all pending claims 1-9 and 20-22 of the present application are now in condition for allowance. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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